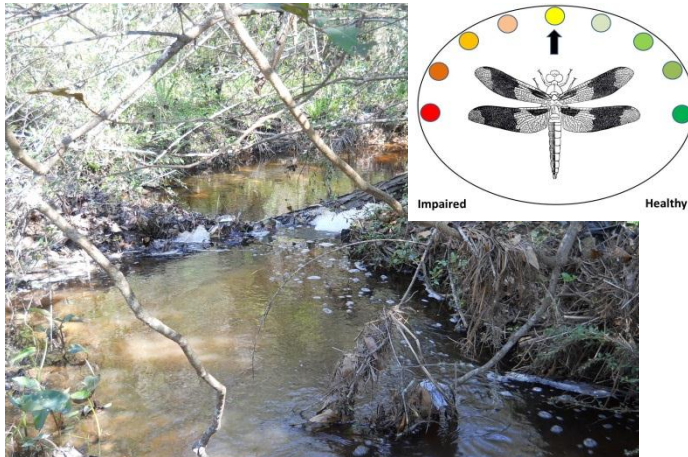


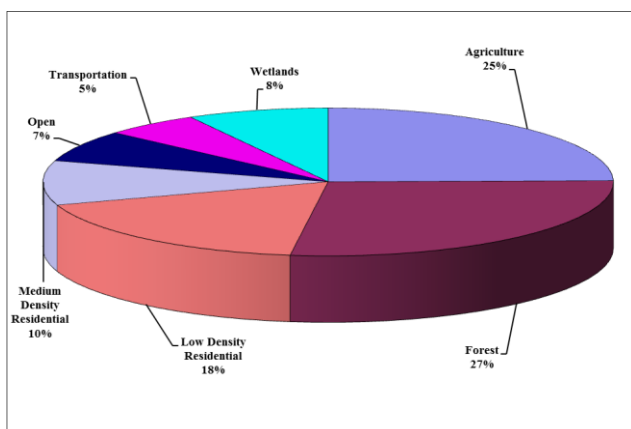
## Waterbody: Apalachee Creek (formerly known as Unnamed Stream #3 at Apalachee Parkway)



### Basin: Lake Lafayette

Apalachee Creek is a slightly tannic stream that flows north and drains into Lower Lake Lafayette.

As shown in the following pie chart, approximately 58% of land use in the 1,052 acre watershed is agricultural, residential, or transportation. Increases in stormwater runoff, and waterbody nutrient loads can often be attributed to these types of land uses.



### Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may

include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. Water quality standards are designed to protect designated uses of the waters of the state (*e.g.*, recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

### Methods

Surface water samples were collected to determine the health of Apalachee Creek and met the requirements of the Florida Department of Environmental Protection (FDEP).

### Results

#### *Nutrients*

According to FDEP requirements, Numeric Nutrient Criteria (NNC) (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. Due to low water conditions, FDEP data requirements for the NNC could not be met for 2007 through 2008 and 2010 through 2012 (Table 1). The 2009 and 2013 results showed that the NNC thresholds were not exceeded.

**Table1.** FDEP's total nitrogen and phosphorus criteria for streams applied to Apalachee Creek.

Apalachee Creek	Total Nitrogen Threshold 1.03 mg/L	Total Phosphorus Threshold 0.18 mg/L
2007- 2008	-	-
2009	0.32	0.11
2010-2012	-	-
2013	0.41	0.12

## **Other Parameters**

### *Vegetation*

Several species of exotic plants line the bank of Apalachee Creek including *Colocasia* sp. (taro) and *Ligustrum* sp. (privet). In many cases, exotic plants will crowd out and replace native plants. This may stress native wildlife, which have evolved to depend on native plants for food and shelter. The native wildlife may move away or perish if the native vegetation is replaced by exotic plants.

### *Other Parameters*

Other water quality parameters appear to be normal for the area and no impairments were noted.

## **Conclusions**

Based on ongoing sampling, Apalachee Creek met the nutrient thresholds for the East Panhandle Region. Several species of exotic plants line the bank of Apalachee Creek which may affect native wildlife dependent on native plants for food and shelter. Other water quality parameters appear to be normal for the area and no impairments were noted.

Thank you for your interest in maintaining the water quality of Leon County's aquatic resources. Please feel free to contact us if you have any questions.

## **Contact and resources for more information**

[www.LeonCountyFL.gov/WaterResources](http://www.LeonCountyFL.gov/WaterResources)

[Click here to access the results for all water quality stations sampled in 2013.](#)

Johnny Richardson, Water Resource Scientist  
(850) 606-1500  
[Richardsonjo@leoncountyfl.gov](mailto:Richardsonjo@leoncountyfl.gov)